IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF OHIO EASTERN DIVISION

IN RE: NATIONAL PRESCRIPTION OPIATE LITIGATION

This document relates to:

The County of Summit, Ohio, et al. v. Purdue Pharma L.P., et al.,
Case No. 18-op-45090

and

The County of Cuyahoga v. Purdue Pharma L.P., et al.,
Case No. 1:18-op-45004

MDL No. 2804

Hon. Dan Aaron Polster

MEMORANDUM OF LAW IN SUPPORT OF DEFENDANTS' MOTION TO EXCLUDE EXPERT TESTIMONY PURPORTING TO RELATE TO ABATEMENT COSTS AND EFFORTS

TABLE OF CONTENTS

					Page			
INTE	RODUC	CTION .			1			
LEG	AL AN	D FAC	TUAL I	BACKGROUND	3			
I.	Abatement Law In Ohio							
II.	Particular Expert Testimony Offered In Support Of Abatement Costs							
	A.	G. C	Caleb Alexander					
	B.	Jeffr	frey B. Liebman					
	C.	Kath	Katherine Keyes					
	D.	Scott L. Wexelblatt						
	E.	Nancy K. Young						
	F.	Thomas McGuire						
ARG	UMEN	TT			11			
I.	Lieb	man and	d Alexar	nder's Abatement Opinions Are Irrelevant And Unreliable	11			
	A. Liebman And Alexander's Opinions Are Irrelevant				11			
		1.		re to distinguish between the effects of prescription opioid cations and illegal street drugs	12			
		2.		re to exclude other sources of funding, including existing rams available in the Counties	13			
		3.	Impro	oper reliance on nationwide data	15			
	B.	Liebman and Alexander's Abatement Opinions Are Not Based On A Reliable Methodology						
		1.	Relia	nce on insufficient sources of facts and data	19			
			a)	Liebman	19			
			b)	Alexander	25			
		2.	Incon	sistencies regarding timeframe	30			
		3.	Inabi	lity to test methods	30			
II.	To The Extent Plaintiffs' Other Experts Opine About Abatement, Those Opinions Must Also Be Excluded				31			
	A. Keyes							
	B.	Plaintiffs' Other Experts—Wexelblatt, Young, and McGuire—Do Not Offer Relevant Opinions On Abatement That Fit The Case						
		1.	Wexe	elblatt	34			
		2.	Youn	ıg	35			

Case: 1:17-md-02804-DAP	Doc #: 1865-1	Filed:	07/19/19	3 of 46.	PageID #: 59058
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TABLE OF AUTHORITIES

	Page(s)
Cases	
Asad v. Cont'l Airlines, Inc., 314 F. Supp. 2d 726 (N.D. Ohio 2004)	22, 26
Brown v. Scioto Cty. Bd. of Commrs., 622 N.E.2d 1153 (Ohio Ct. App. 1993)	4
Cincinnati v. Beretta U.S.A. Corp., 768 N.E.2d 1136 (Ohio 2002)	4, 17, 36
City of Toledo v. Rumford Properties, Inc., 1988 WL 114400 (Ohio Ct. App. Oct. 28, 1988)	4
Cummins v. Lyle Indus., 93 F.3d 362 (7th Cir. 1996)	18
Daubert v. Merrell Dow Pharm., Inc., 43 F.3d 1311 (9th Cir. 1995)	23, 25, 31
Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993)	25, 27, 30
Foust v. Metro. Sec. Servs., No. 10-cv-340, 2011 WL 4832570 (E.D. Tenn. Oct. 12, 2011)	26
Fouty v. Ohio Dep't of Youth Servs., 855 N.E.2d 909 (Ohio Ct. App. 2006)	4
General Electric v. Joiner, 522 U.S. 136 (1997)	18, 20, 27
Goebel v. Denver & Rio Grande W. R.R. Co., 215 F.3d 1083 (10th Cir. 2000)	29
Holmes v. Securities Investor Protection Corp., 503 U.S. 258 (1992)	4, 17
Johnson v. Manitowoc Boom Trucks, Inc., 484 F.3d 426 (6th Cir. 2007)	23
Kahn v. CVS Pharmacy, Inc., 846 N.E.2d 904 (Ohio Ct. App. 2006)	4

In re Lipitor (Atorvastatin Calcium) Marketing, Sales Practices & Prods. Liab. Litig., 174 F. Supp. 3d 911 (D.S.C. 2016)	23
Local Bd. of Health, Boone Cty. v. Wood, 243 N.W.2d 862 (Iowa 1976)	5
Newell Rubbermaid, Inc. v. Raymond Corp., 676 F.3d 521 (6th Cir. 2012)2	3, 25
Oddi v. Ford Motor Co., 234 F.3d 136 (3d Cir. 2000)	31
In re Polypropylene Carpet Antitrust Litig., 93 F. Supp. 2d 1348 (S.D. Fla. 2000)	21
Power Integrations, Inc. v. Fairchild Semiconductor Intern., Inc., 711 F.3d 1348 (Fed. Cir. 2013)	33
Pride v. BIC Corp., 218 F.3d 566 (6th Cir. 2000)12, 1	5, 32
Rosen v. Ciba-Geigy Corp., 78 F.3d 316 (7th Cir. 1996)	18
In re Scrap Metal Antitrust Litig., 527 F.3d 517 (6th Cir. 2008)1	7, 32
Smith v. Rasmussen, 57 F. Supp. 2d 736 (N.D. Iowa 1999)	24
Tamraz v. Lincoln Elec. Co., 620 F.3d 665 (6th Cir. 2010)	8, 29
In re TMI Litig., 193 F.3d 613 (3d Cir. 1999)2	1, 22
Triangle Properties, Inc. v. Homewood Corp., 3 N.E.3d 241 (Ohio Ct. App. 2013)	.4, 36
Turpin v. Merrell Dow Pharms., Inc. 959 F.2d 1349 n.1 (6th Cir. 1992)	24, 28
Vincent v. United Techs. Corp., 854 F.2d 1318 (4th Cir. 1988)	33
In re Welding Fume Prod. Liab. Litig., No. 1:03-CV-17000, 2005 WL 1868046 (N.D. Ohio Aug. 8, 2005)	24

In re Whirlpool Corp. Front-Loading Washer Prod. Liab. Litig., 45 F. Supp. 3d 724 (N.D. Ohio 2014)	21, 22
Rules	
Fed. R. Evid. 702	17
Fed. R. Evid. 703	21
Other Authorities	
John G. Culhane & Jean Macchiaroli Eggen, Defining A Proper Role for Public Nuisance Law in Municipal Suits Against Gun Sellers: Beyond Rhetoric and Expedience, 52 S.C. L. Rev. 287 (2001)	5
Kenneth Rothman, Modern Epidemiology 119 (1986)	24
McQuillin, Charging cost of abatement to property or owner, 6A McQuillin Mun. Corp. § 24:83 (3d ed.) (July 2018 Update)	4

INTRODUCTION

Plaintiffs offer a patchwork of experts in support of their extraordinary ten-figure claims for future "abatement." According to these experts, money is needed to fund various programs, services, and initiatives aimed at the "opioid crisis" in Summit and Cuyahoga Counties (the "Counties"). A total of six experts offer some opinions on the issue of abatement: Caleb Alexander, M.D., Jeffrey Liebman, Ph.D., Katherine Keyes, Ph.D., Scott Wexelblatt, M.D., Nancy Young, Ph.D., and Thomas McGuire, Ph.D. Only Alexander and Liebman purport to offer comprehensive abatement plans. Those plans predict a total cost of \$6.79 billion over 10 years (Alexander) and \$7.2 billion over 15 years (Liebman). The others do not assign a cost, but instead assert that certain programs and services would be preferred. Even assuming that Plaintiffs could recover, as an abatement remedy, costs such as those identified by Plaintiffs' experts (and, as will be argued elsewhere, such monetary remedies should not be recoverable), their opinions should be excluded.

In *Daubert* terms, these opinions are neither relevant nor reliable. They are not relevant because they are built on data and offer conclusions that have no bearing on the question that must be answered in this case: what forward-looking equitable relief could be awarded as "abatement" of the purported nuisance in the *Counties* caused by the *Defendants*' allegedly wrongful conduct. Put another way, they propose programs for a variety of harms without any connection to the Defendants.² They are not reliable because they are based on unsupported

¹ Plaintiffs' public nuisance and abatement theories lack legal and factual support, and Defendants reserve all such arguments.

² The related issue to this problem is that Plaintiffs continue to fail to define with any reasonable degree of specificity what the "public nuisance" is for which they seek to hold Defendants liable. The amorphous "opioid crisis" is a multifaceted issue, including the influx into the country of illicit and ever more powerful street drugs like heroin and fentanyl through illegal cartels. The *Continued on following page*

assumptions that are essentially guesses, and suffer from other serious methodological flaws that rest on little more than their own *ipse dixit*.

The problems with these opinions are manifold.

First, their opinions on what is needed for abatement simply assume—wrongly—that the entire "opioid crisis" resulted from Defendants' allegedly culpable conduct, and Plaintiffs' experts make no effort to (indeed, say they cannot) determine whether that assumption is true. And, to the extent it is not, both experts who assign costs concede that they cannot "back out" costs unrelated to Defendants (e.g., costs to treat users of non-opioid drugs, or users of illegal street opioids such as heroin and fentanyl) from their estimates. Plaintiffs' experts would have Defendants abate (at least in part) harms they did not cause.

Second, the opinions do not consider whether the programs and services they suggest already exist (or were considered and rejected), whether they already are funded by the Counties, or whether they would be funded by another source (such as the federal or state governments instead of the Counties, or private entities).

Third, they fail to offer a reasonable link between the laundry list of potential solutions they offer to the Counties' actual, specific needs—instead, they unreliably extrapolate from nationwide data. At bottom, their proposals amount to nothing more than an academic exercise in which they propose their plans and lists of aspirational best practices in a vacuum, untethered

Continued from previous page

Court, however, has previously observed (in ruling on the motion to dismiss in the "Tribes" cases) that it would consider the nuisance to mean something more narrow: "the condition of having more [prescription] opioids free in circulation than are medically necessary (e.g. an illicit, secondary, or 'black' market)," with "defendants' conduct in carrying out their business activities [as] the instrumentality by which the nuisance was created and fueled." Ruling on Tribes R&R at 19-20. Using this definition of the alleged nuisance, the opinions by Plaintiffs' abatement experts (addressing illegal drug trafficking, among other things) clearly do not "fit" the alleged harm.

from the practical considerations needed to craft an abatement remedy tailored to the Plaintiffs in this case—particularly given the large sums they seek.

As explained, Plaintiffs' abatement experts do not meet the Rule 702/Daubert standard for reliability or relevance necessary for admission. Alexander and Liebman's testimony should be excluded because their conclusions are not relevant and do not fit the facts of this case, and because their conclusions are unreliable to the extent that they are based on assumptions and data that are not specific to the Counties and cannot be tested adequately. The testimony of Keyes, Young, Wexelblatt, and McGuire is irrelevant to any issue to be decided in connection with abatement because it is entirely dependent on Alexander and Liebman's irrelevant and unreliable abatement models. Moreover, they provide no cost estimates and (like Alexander and Liebman), their opinions are based upon unsupported assumptions and unreliable data.

In sum, the opinions of each of the "abatement" experts are too unreliable and lack probative value with respect to the question at hand—namely, what abatement could be properly ordered to address the purportedly wrongful conduct by Defendants that allegedly caused a public nuisance within the specific counties at issue. The testimony should be excluded.

LEGAL AND FACTUAL BACKGROUND

Plaintiffs propose to offer expert testimony related to the costs associated with "abating" the alleged public nuisance, but have not identified a single expert to address that topic exclusively. Instead, they offer several experts who, at least in part, touch on the issue of abatement. To provide a foundation for the reasons why these experts do not meet the standard set forth in *Daubert* and its progeny, Defendants set forth the controlling legal principles that govern the abatement remedy for public nuisance under Ohio law.

I. Abatement Law In Ohio

Under Ohio law, a public nuisance is "an unreasonable interference with a right common to the general public." *Brown v. Scioto Cty. Bd. of Commrs.*, 622 N.E.2d 1153, 1158 (Ohio Ct. App. 1993). The relief to be awarded, however, must be limited to that which has a "direct relation" to the defendant's injurious conduct. *Cincinnati v. Beretta U.S.A. Corp.*, 768 N.E.2d 1136, 1148 (Ohio 2002) (quoting *Holmes v. Securities Investor Protection Corp.*, 503 U.S. 258 (1992)). "[T]he injured party should not receive a windfall" or be put in a "better position than that party would have enjoyed had the wrongful conduct not occurred." *Triangle Properties, Inc. v. Homewood Corp.*, 3 N.E.3d 241, 255 (Ohio Ct. App. 2013).

The relief ordered "must be shown with reasonable certainty, and cannot be based upon mere speculation or conjecture." *Kahn v. CVS Pharmacy, Inc.*, 846 N.E.2d 904, 909 (Ohio Ct. App. 2006); *see also City of Toledo v. Rumford Properties, Inc.*, 1988 WL 114400, at *2 (Ohio Ct. App. Oct. 28, 1988) (holding that city with public nuisance claim was not entitled to abatement costs because "[t]he mere fact that [the city] introduced evidence of possible costs of demolishment at the hearing on this matter does not entitle it to an award of speculative [relief]"); McQuillin, *Charging cost of abatement to property or owner*, 6A McQuillin Mun. Corp. § 24:83 (3d ed.) (July 2018 Update) ("The municipality may be required to furnish substantial proof that the method it employed to abate the nuisance was the only reasonable and practicable one."). This principle holds true for orders requiring future abatement activities—an order for abatement must be based on harm to be avoided that "is reasonably certain to incur in the future." *Fouty v. Ohio Dep't of Youth Servs.*, 855 N.E.2d 909, 918 (Ohio Ct. App. 2006); *see also City of Toledo*, 1988 WL 114400, at *2 (determining that "the trial court inappropriately

assessed future costs for the abatement of this nuisance" where the city plaintiff only introduced evidence of "possible" costs).³

II. Particular Expert Testimony Offered In Support Of Abatement Costs

A. G. Caleb Alexander

G. Caleb Alexander is an internist and Professor of Epidemiology and Medicine. Ex. A (Alexander 4/3/2019 Rep.) at 1.⁴ He does not specialize in the care of patients with opioid use disorder ("OUD"). *Id.* Outside of litigation, he has researched opioid issues, but not in a way that is specific to the Counties. *Id.* at 2. To that end, here, Alexander estimated "national abatement costs" when arriving at his conclusions. *Id.* at 3.

Alexander outlines three categories of programs and services he believes would "abate" the nuisance: (1) improving the safe use of prescription opioids and treatment of pain; (2) identifying and treating individuals with OUD; and (3) customizing abatement remedies for specific subpopulations. *Id.* at 13-14. Alexander offers important caveats, however, about his conclusions:

• "I leave the task of defining the specific application of these programs for [the Counties] to the communities themselves, with assistance where needed from experts participating in the MDL and other outside consultants;" *id.* at 13.

³ See also Local Bd. of Health, Boone Cty. v. Wood, 243 N.W.2d 862, 869 (Iowa 1976) ("It [is] incumbent upon plaintiffs to offer some additional evidence tending to establish that the charges made were necessary and reasonable in abating the nuisance[.]"); see also John G. Culhane & Jean Macchiaroli Eggen, Defining A Proper Role for Public Nuisance Law in Municipal Suits Against Gun Sellers: Beyond Rhetoric and Expedience, 52 S.C. L. Rev. 287, 327 (2001) ("Given the purpose and history of public nuisance, those costs not reasonably assignable to abating the nuisance should be disallowed.").

⁴ Alexander submitted his expert report on March 24, 2019, followed by a supplemental report on April 3, 2019, and additional updated materials on April 17, 2019. Unless otherwise noted, all references herein will be to Alexander's April 3, 2019 supplemental report.

- "I leave it to the communities themselves to determine whether elements of any given remedy are already in place and the degree to which further investment should be undertaken;" *Id.* at 18 n.19.
- "[T]he needs of communities differ, and the optimal program for a given city or county will depend upon a variety of different factors including the adequacy of the primary care and specialty workforce, urbanicity, and existing infrastructure devoted to addiction treatment." *Id.* at 33.

Rather than estimating the scope (and therefore costs) of any abatement plan based on the actual needs and resources in the Counties, Alexander instead suggests that the nationwide programs he proposed and costs he calculated can be "mapped" to the Counties. *Id.* at 55. As part of this analysis, he did not assess causation or Defendants' conduct. Ex. C (Alexander Dep.) at 68:16-23. The total nationwide cost he calculated, over ten years, is \$452.9 billion. Ex. A (Alexander 4/3/2019 Rep.) at 56. Alexander admitted that his "goal was *not* to identify the *precise costs* of any given category, but rather to develop an *initial estimate* from which costs specific to Cuyahoga and Summit Count[ies] can be developed." *Id.* at 55 (emphasis added); *see also* Ex. C (Alexander Dep.) at 134:9-14 (same); *id.* at 135:15-136:8 (Alexander admitted that he had not conducted any "detailed assessments of the specific costs in Cuyahoga and Summit Counties" that will be required); *id.* at 192:12-25 ("I was not asked to design an abatement program for [Summit and Cuyahoga] [C]ounties. I was asked to identify evidence-based approaches to abate the opioid epidemic at a national level").

When "mapped" onto the Counties, costs of abatement activities over ten years amount to approximately \$6.79 billion. Ex. A (Alexander 4/3/2019 Rep.) at 56. Alexander again adds four important caveats, admitting that: (1) his nationwide figures are based on data with significant

assumptions and limitations; (2) "there are a number of limitations in *extrapolating* from national estimates to specific localities," *id.* (emphasis added); *see also* Ex. C (Alexander Dep.) at 267:21-268:2; (3) his "analyses do not address how abatement costs should be shared across different parties" such as federal, state, and local sources of funding, Ex. A (Alexander 4/3/2019 Rep.) at 56; and (4) "*some ... but not all*, of my estimates exclude costs arising from individuals with heroin use disorders without prior prescription opioid use." *Id.* (emphasis added).

B. Jeffrey B. Liebman

Jeffrey B. Liebman is an economist and Professor of Public Policy. Ex. D (Liebman 4/3/2019 Rep.) at 3. Liebman admits he has no experience in calculating the cost of abatement activities relating to public health issues like opioid use. Ex. E (Liebman Dep.) 31:12-32:6. He reviewed literature on the subject to formulate his opinion in this case. Ex. D (Liebman 4/3/2019 Rep.) at 12. Following that review, Liebman estimated the abatement resources required by individuals located within the Counties for the next 15 years and the cost of those resources. *Id.* at 5-6. In doing so, Liebman identified four major areas of needed services: (1) treatment programs; (2) harm reduction programs; (3) prevention programs; and (4) system coordination. *Id.* at 6-7. Based on these categories (and the nineteen programs or processes he suggests to implement them), Liebman estimates that the cost equates to \$5 billion for people in Cuyahoga County and \$2.2 billion for people in Summit County over the next 15 years. *Id.* at 7.

Liebman adds several important caveats to his opinions. First, he does not adjust his estimated abatement costs downward to account for individuals in the Counties who are users of illegal opioids with no possible connection to the alleged wrongful conduct of the Defendants in this case. *Id.* at 6 n.7. Second, he notes that there is "uncertainty about the extent of future treatment needs," because his abatement plan is based only on an *assumed* percentage of the adult population in the Counties with OUD (*i.e.*, 1.4%). *Id.* at 29. This assumption comes from

one study (Pitt, *et al.*), which in turn, relies on nationwide data from the National Survey on Drug Use and Health ("NSDUH") that the study then further adjusts upward by 70% (based on assumptions) to attempt "to correct for underreporting and for populations like the homeless and incarcerated." *Id.* Liebman has no idea whether these assumptions are correct or not. Third, Liebman makes no attempt to adjust his abatement costs downward to account for existing services already being provided by the Counties (and that would need to be provided irrespective of the Defendants' alleged acts or omissions) or for other sources of funding already available for the types of abatement services and programs he suggests. Fourth, he—like Alexander—did not consider causation or the Defendants' conduct in reaching his opinions. Ex. E (Liebman Dep.) at 63:15-64:24.

C. Katherine Keyes

Katherine Keyes is an Associate Professor of Epidemiology. Ex. F (Keyes Rep.) at 1. Only a portion of her report relates to abatement. *See id.* at 3. Keyes advocates for a "three-point abatement plan" but says her "focus on these aspects is intended to be illustrative rather than exhaustive." The three areas are: (1) medication-assisted treatment ("MAT") for people with OUD; (2) harm reduction through naloxone availability; and (3) synthetic opioid testing and warning systems. *Id.* at 30. Her focus on these points, however, is "intended to be illustrative rather than exhaustive." *Id.* Keyes acknowledges—but does not specifically address—that "interventions to reduce the supply and control [of] prescriptions of opioids are already in effect in Ohio." *Id.* Like Alexander, Keyes based her MAT analysis on data from a nationwide meta-analysis (Degenhardt, *et al.*) that calculated an estimated "overall drug overdose death rate (including opioids as well as other drugs)." *Id.* at 32-33. She did the same to arrive at her estimates on Naloxone distribution. *Id.* at 39 (utilizing General Social Survey data to estimate the size of the family and social network of individuals in need of naloxone access). Keyes did

not assess the degree to which MAT and Naloxone already are available in the Counties; and does not offer a cost estimate for her abatement proposals.

D. Scott L. Wexelblatt

Scott L. Wexelblatt is the Regional Medical Director of Newborn Services at Cincinnati Children's Hospital Medical Center and an Associate Professor at the University of Cincinnati College of Medicine. Ex. H (Wexelblatt Rep.) at 3. Wexelblatt's report focuses on problems associated with OUD as it relates to pregnant women and infants born with neonatal abstinence syndrome ("NAS"). Id. at 7-12. Although Wexelblatt does not address abatement as such, his report contains a bullet-point list of "recommendations for improving outcomes" that he suggests will "address this urgent issue and improve outcomes." Id. at 22-24. The recommendations fall into three general categories: (1) prevention; (2) education and training; and (3) support services and interventions. Id. Despite making these recommendations, Wexelblatt offered no evidence or citations to support why he chose these particular recommendations; he did not identify who should be responsible for implementing and paying for them; he did not consider causation or the Defendants' conduct, Ex. I (Wexelblatt Dep.) at 151:19-152:3; 152:25-153:6; he did not even attempt to assess the extent to which his recommended programs already are available in the Counties, id. at 158:23-159:9; and he did not offer any estimate of what it would cost to implement them (if they have not already been implemented). *Id.* at 93:14-21.

E. Nancy K. Young

Nancy K. Young is a social worker and Executive Director of Children and Family Futures, a non-profit organization. Ex. J (Young Rep.) at 1. Like Wexelblatt, Young does not offer an opinion on "abatement," but "on necessary and appropriate remedies in response to the opioid epidemic." *Id.* Indeed, she identifies many such programs that already have been implemented. *Id.* at 22-25. At the conclusion of her report, Young offers a "Summary of

Recommendations for Infants and their Families with Prenatal Opioid Exposure in Child Welfare and Related County Systems," *id.* at 35-36, and a "Summary of Recommendations for the Impact of Families with Opioid Use Disorders in Child Welfare and the Related County Systems." *Id.* at 36-37. Young did not assess whether these programs were considered and rejected by the relevant government entities; did not consider causation or the Defendants' conduct; did not assess whether social services in the Counties have specific additional needs due to changes in opioid use; and she neither offers a cost estimate for her recommendations, nor does she offer an analysis of how such recommendations would be implemented. *See id.* at 35-37.

F. Thomas McGuire

Thomas McGuire is a Professor of Health Economics. McGuire Public Nuisance Report at 1. His research concerns the economics of managed care, health insurance, health care payment systems, drug pricing and procurement, the economics of health care disparities by race and ethnicity, and the economics of behavior healthcare. *Id.* McGuire's "Public Nuisance" report—his "first public nuisance venture," Ex. M (McGuire Dep.) at 617:1-2—expressly disclaims any opinion on abatement: "I have not been asked to offer an opinion on the scope or cost of programs needed to abate this nuisance, but such a report could be submitted at such time as the Court deems appropriate." McGuire Public Nuisance Report at 3 n.6.5 McGuire does not purport to quantify the economic costs of the claimed nuisance. But these costs that McGuire purports to quantify are the "externalities" from *all* opioid shipments, not just those shipments that allegedly are attributable to Defendants' wrongdoing.

⁵ McGuire has provided another expert report in this case: "Damages to Bellwethers." McGuire's "Damages to Bellwethers" report does not concern public nuisance or abatement. Instead, that report concerns the Counties' damages related to adverse health, public health, public welfare, and criminal justice consequences of the opioid epidemic and is the subject of a separate motion. *See* McGuire Damages to Bellwethers Report at 4–5.

ARGUMENT

I. Liebman and Alexander's Abatement Opinions Are Irrelevant And Unreliable

Liebman and Alexander are Plaintiffs' principal abatement experts, each of whom opines that the cots to implement an abatement plan will fall in the billions of dollars. But even a cursory review of their expert reports reveals that both experts were given *carte blanche* to craft abatement plans that have little to do with the Counties' actual individualized needs—or plans that are tied to the alleged conduct by Defendants.⁶ In other words, they engaged in academic exercises in designing "perfect" abatement models to address the "opioid crisis" unmoored to the facts of this case and the questions at hand. Both experts relied upon assumptions drawn from nationwide data that is, at least in the case of Liebman, tied to the Counties' needs by little more than his own say-so. Alexander, for his part, readily admits that he was not asked, nor did he attempt, to craft an abatement plan for the Counties. His is purely a nationwide plan that, given the nature of this case, offers little help to a factfinder tasked with crafting a local remedy to address alleged wrongful conduct by Defendants. The experts' reports and deposition testimony demonstrate that their opinions are neither reliable nor relevant to the facts of this case.

A. Liebman And Alexander's Opinions Are Irrelevant

Liebman and Alexander's testimony—in order to be admissible as opinions regarding the potential future costs of "abatement"—must pertain to abatement measures that directly relate to Defendants' alleged culpable conduct; can actually be implemented; and are reasonable and

⁶ The problem here is that Alexander and Liebman's abstract opinions about what *could be done* are divorced from any reliable or relevant data that shows what *actually already has been done* and what actually remains to be done in the Counties as a result of Defendants' alleged misconduct. Without such data, the experts' abstract ideas are unhelpful, because they merely offer a buffet of options, without any reliable basis to justify their opinions that astronomical amounts are needed to abate the nuisance alleged here.

justified.⁷ If their testimony does not address these points, then it should be excluded as irrelevant. *Pride v. BIC Corp.*, 218 F.3d 566, 578 (6th Cir. 2000) (recognizing that "Rule 702 requires that the expert's testimony assist the trier of fact. This requirement has been interpreted to mean that [expert] testimony must 'fit' the facts of the case").

Both experts ask this Court to make an analytical leap by relying on over-inclusive data that includes users of illegal street drugs, such as heroin and fentanyl, and by failing to account for state, local, and federal programs already in place or other sources of funding that that fund programs providing the services the experts say need to be implemented. Finally, although Liebman purports to focus on the Counties, the data that he relied upon, like Alexander's, is drawn from a nationwide sample that has merely been "scaled down" relative to the populations within those Counties. Taken together, these factors all create an insurmountable "analytical gap" between the opinions rendered and the facts of this case, and warrant exclusion of Plaintiffs' experts.

1. Failure to distinguish between the effects of prescription opioid medications and illegal street drugs

For purposes of their opinions, Liebman and Alexander both define opioids to include not only prescription opioid medications like the ones Defendants manufactured and distributed, but also illegal drugs such as heroin and fentanyl that have nothing to do with Defendants. Ex. E (Liebman Dep.) at 81:20-82:1 ("[T]here's nothing in my plan that is distinguishing between illicit and not illicit [opioids]."); Ex. C (Alexander Dep.) at 12:16-13:8. Worse, neither made any attempt at differentiating between the costs associated with the misuse and abuse of prescription

⁷ As noted above, Defendants dispute that the experts' proffered abatement mechanisms are recoverable as an abatement remedy, and that Plaintiffs' public nuisance theory is valid, but those issues will be addressed elsewhere.

medications (due to any cause) from those associated with the abuse of illegal street drugs. Ex. C (Alexander Dep.) at 12:16-13:8 (when asked to define "opioids" in the context of his report, he responded "in general, I'm probably referring to both prescription and nonprescription opioids"). Liebman, for his part, has "not thought about" whether he could account for individuals who were never prescribed opioids by a physician, nor did he have an estimate for how much lower his abatement plan costs would be if such individuals were excluded. Ex. E (Liebman Dep.) at 103:12-17. When asked if it is even possible to separate out such individuals and to make such a calculation, Liebman's response is telling: "I think it would be complicated." *Id.* at 325:15. When asked to elaborate, he would add only that someone trying to do so "could make an assumption" about what fraction would need to be separated out in order to make the data fit the facts of this case. *Id.* at 327:2-3.

In short, the experts do not propose abatement plans tailored to addressing the public nuisance caused by the defendant's alleged misconduct. Defendants cannot be responsible for individuals whose addiction resulted from an opioid they were not prescribed, including individuals who exclusively use illegal, non-prescription opioids such as heroin and fentanyl. Therefore, because Liebman and Alexander lumped together users of prescription medications and users of illegal drugs when constructing their abatement plans, their calculations do not fit the facts of this case and should be excluded.

2. Failure to exclude other sources of funding, including existing programs available in the Counties

Another problem with Liebman's opinion is that it fails to account for the myriad programs already in place, as well as other sources of funding that are available for the types of services he recommends. When asked "[d]oes your estimated cost for the abatement plan take into account the fact that counties may get some money from, for example, the federal

government specifically earmarked for the type of activities within your abatement plan?" Liebman responded that "the scope of my assignment was not to parse out who would be paying for it." Ex. E (Liebman Dep.) at 139:8-19. Moreover, he did not subtract medical costs that likely would be paid by insurance companies, *id.* at 140:15-23, nor did he form an opinion about whether Plaintiffs may have some responsibility for contributing to the costs of his plan. *Id.* at 303:3-19.

Liebman's failure to account for the other sources of funding is another reason why his cost estimates do not fit the facts of this case. Specifically, there are many sources of already-existing funding for the types of public health resources Liebman advocates for in his plan—which funding would be provided (in whole or part) regardless of the outcome of this case. The federal government, along with state and local governments, all provide funding to various degrees to support such programs. And, on the individual level, insurance companies often pay for health care treatment. Accordingly, it is unhelpful—indeed, it is unfairly prejudicial—to suggest that Defendants here should be responsible for the entire cost of Liebman's abatement plan.

The same is true of Alexander, who admitted that "my model wasn't focused on figuring out who should shoulder the costs; it was merely to estimate the costs." Ex. C (Alexander Dep.) at 321:18-20. Like Liebman, Alexander testified that he did not address how those costs should be shared across different parties or who should pay for what. Instead, he assumed that Defendants should be responsible for all costs associated with his plan. *Id.* at 203:8-25; Ex. A (Alexander 4/3/2019 Rep.) at 56-57. He summed up his approach this way: "I really didn't consider the amount already being invested as I made estimates of what I thought investments would ultimately take." *Id.* at 208:2-5. As with Liebman, Alexander's failures create a fracture

between his cost assessments and the facts of this case. He fails to address programs already in place and other funding sources in favor of a lump-sum calculation he ascribes solely to Defendants, without any connection to the alleged wrongdoing.

For example, Alexander testified that he is aware of the National Institutes of Health's 2018 HEAL Initiative, which provides \$1.1 billion in funding aimed at reducing "morbidity and mortality from the opioid epidemic." Ex. C (Alexander Dep.) at 204:9-205:6. Alexander is also aware of Ohio's prescription drug monitoring program and did not account for it. *Id.* at 208:24-209:21. Finally, Alexander recognized, but did not account for, the fact that "considerable investments may already be being made by any number of parties in some of these categories, and so I wasn't asked nor did I attempt to identify either how responsibility should be shared across parties or how monies should be—how claims should be made against various parties as a function of how much has already been invested." *Id.* at 207:17-25. By not taking these funding sources into account, Alexander's conclusions are completely unhelpful because they provide no guidance for actually assessing costs of abatement activities that are allegedly attributable to the Defendants alleged conduct and would not otherwise be provided but for abatement relief. *Pride*, 218 F.3d at 578.

3. Improper reliance on nationwide data

At the heart of both Liebman and Alexander's abatement opinions is a foundational reliance on nationwide data that does not fit the facts of this case. By relying on data from nationwide sources, neither experts' opinions address the Counties' specific circumstances and needs.

Alexander readily admits that his abatement plan is nationwide and is not intended to apply directly to the Counties: "I was not asked to design an abatement program for these counties. I was asked to identify evidence-based approaches to abate the opioid epidemic at a

national level. Ex. C (Alexander Dep.) at 192:12-16; *id.* at 116:11-14 ("Q. You have not attempted to apply your model locally in Cuyahoga and Summit Counties, correct? A. No, that's correct."). He conceded that his research related to the Counties was limited to "reviewing some documents provided ... by plaintiffs' counsel." *Id.* at 52:12-17. Although he "left it to other experts to develop plans specific to Cuyahoga and Summit Counties," rather than conducting the analysis himself, Plaintiffs do not have any expert who has done so. *Id.* at 253:9-14; *see also id.* at 263:4-7 ("I believe there are other experts whose work is focused on estimating the specific costs in Cuyahoga and Summit Counties.").

Alexander also recognized the difficulties with extrapolating local cost estimates from that data. See id. at 114:3-8 ("Though we model the U.S. population on average to gain highlevel policy insights, different geographical regions, age groups, races and genders will experience different severities and drivers of opioid-related problems."). By way of example, Alexander's report devotes a single paragraph to such extrapolation by estimating that the Counties accounted for 1.5% of all opioid deaths nationwide, and thus allotted 1.5% (\$6.79) billion) of his total abatement cost to the Counties. Ex. A (Alexander 4/3/2019 Rep.) at 56. When he was asked about the limitations on that approach, however, he admitted: "I looked at one measure of morbidity or mortality in one year as the method of allocation, and I believe that that's a limited—a limited way to appraise attributable share or allocation share. It's not what I was asked to do. I was not asked—I mean, I provided paragraph 180 as a high-level qualified caveated approach of thinking about the potential costs in two counties in the United States." Ex. C (Alexander Dep.) at 263:14-24. A further example of the shortcomings of this extrapolation method relates to Alexander's assumptions about the population to be targeted with mass media communications. Specifically, 1.5% of the overall mass media target population identified in Alexander's report amounts to 2.25 million people—even though the Counties combined contain only 1.78 million people. *Id.* at 268:10-25. Alexander produced a supplemental report that did not even attempt to take the national costs he calculates and apportion them to the Counties. *Id.* at 58:11-18; 59:12-20; Ex. B (Alexander 4/17/2019 Rep.).

Liebman, for his part, claims to have offered a more Counties-specific opinion. But even his plan is based on 19 component policies and programs that he came up with after reviewing national literature and consulting with national experts. Ex. E (Liebman Dep.) at 87:8-14. He then "learn[ed] enough about the local situation to craft a solution that matches the local conditions." *Id.* at 87:14-16. His calculations, however, are based on nationwide data. *See id.* at 240:1-12 (recounting email exchanges with McGuire in which they "were discussing the relative merits of ... what I did, which was assume that the national numbers [of OUD] applied to the bellwethers").

This reliance on nationwide data creates a mismatch between the opinions rendered and the facts of this case because it lacks the "direct relation" to the Defendants' alleged injurious conduct *within the Counties*. *See Beretta U.S.A.*, 768 N.E.2d at 1148 (quoting *Holmes*, 503 U.S. 258). The experts' process of "scaling down" nationwide data fails to accurately reflect the Counties' actual needs, and should be rejected. *See* Fed. R. Evid. 702; *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 529 (6th Cir. 2008) (noting that Rule 702 requires an expert's testimony to be "relevant, meaning that it 'will assist the trier of fact to understand the evidence or to determine a fact in issue"").

B. Liebman and Alexander's Abatement Opinions Are Not Based On A Reliable Methodology

Liebman and Alexander's abatement opinions are also insufficiently reliable to warrant admission under Rule 702 and *Daubert*. Expert testimony must be based on a reliable

methodology—an expert's conclusions that have not been (and cannot be) tested, substantiated, or otherwise validated should not be admitted into evidence. In other words, expert opinion based on nothing more than the "ipse dixit" of the expert should be excluded. General Electric v. Joiner, 522 U.S. 136, 146 (1997). When reliability, foundation or verifiable methodology are lacking, an expert's opinion amounts to nothing more than speculation and guess work, which cannot provide the required proof needed on causation. See Tamraz v. Lincoln Elec. Co., 620 F.3d 665, 671 (6th Cir. 2010) (noting that "nothing in his testimony suggests the sort of 'knowledge' on this point that the Rules require—only speculation, which is generally inadmissible"); see also Cummins v. Lyle Indus., 93 F.3d 362, 368 (7th Cir. 1996) (guesswork, even educated hunches by qualified experts, is not enough; evidence must be "genuinely scientific, as distinct from being unscientific speculation offered by a genuine scientist"); Rosen v. Ciba-Geigy Corp., 78 F.3d 316, 319 (7th Cir. 1996) (the "courtroom is not the place for scientific guess work, even of the inspired sort").

Liebman and Alexander's opinions are unreliable for three reasons. First, both experts impermissibly rely upon speculation when calculating the potential cost of the abatement remedy, which renders their testimony fundamentally unreliable. Second, given the amount of speculation and the inherent unknowns associated with an issue as complex as the "opioid crisis," the two experts could not even agree upon an appropriate timeframe for implementing their respective plans—thus opening the door for even more confusion, as opposed to consistent, reliable expert testimony. Third, because so much of the experts' plans was crafted from whole cloth, they left almost no way to actually test the theories, further undermining their reliability.

1. Reliance on insufficient sources of facts and data

a) Liebman

Liebman's methodology is unreliable because it uses unsupported assumptions and projections to support his data, on which he layered additional speculation and guesswork. First, he relied on "assumed" values for the prevalence of OUD within the Counties—a fact that lies at the heart of all of his conclusions; second, he only projected OUD prevalence for the first year of his abatement plan—with the program levels and costs for the remaining years calculated by simply assuming a short (three-year) "ramp-up" period, followed by consistent levels of activity for the duration of the 15 year plan. This, at its core, assumes that his abatement plan will not work (since it assumes that the number of people being treated for addiction at first increases and then does not decline at all). Third, Liebman's research methodology is untestable—he performed what appears to be an ad hoc literature search that cannot be replicated and does not indicate what literature he overlooked (or intentionally excluded) from his research. Fourth, he failed to follow many "best practices" as outlined by government agencies that are charged with projecting costs. Taken together, Liebman's methodology ultimately is built on conjecture and speculation, and should be rejected as unreliable.

First, Liebman's methodology suffers from an overarching reliability problem as it relates to the central data from which many of his opinions flowed: the prevalence of OUD within the Counties for individuals age 12 and older. *See* Ex. D (Liebman 4/3/2019 Rep.) App'x D, Tables C.0; S.0. Liebman testified that his calculation of OUD prevalence (1.4% in both Counties) included the total number of individuals with OUD and Heroin Use Disorder ("HUD"), regardless of whether individuals with HUD previously had used prescription opioids.⁸ Ex. E

⁸ This over-inclusivity, of course, presents its own problems, as discussed *supra*.

(Liebman Dep.) 150:6-19. In arriving at the 1.4% number, Liebman relied on a study by Pitt, *et al.*, that uses an "assumed" value for the percentage of individuals with OUD and HUD based on Centers for Disease Control data, which in turn relied on data from the NSDUH. *Id.* at 152:12-15. Liebman acknowledged that the NSDUH data "has some limitations," which he attempted to overcome by increasing the estimates by "roughly 70 percent" to account for what he considered to be under-represented populations. *Id.* at 153:7-21.

In other words, to calculate the most expensive portion (by far) of his abatement plan,⁹ Liebman started with an estimate from some sources, made some speculative adjustments to that estimate, and then kept that estimate constant over the course of 15 years. Speculative and *ad hoc* adjustments to data that was already an admitted "assumption" does not make for a reliable foundation. *See Joiner*, 522 U.S. at 146 ("[N]othing in either *Daubert* or the Federal Rules of Evidence requires a district court to admit opinion evidence which is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.").

Second, in addition to Liebman's questionable adjustments to the OUD prevalence, his conclusions become even less reliable in successive years of his 15-year abatement plan. Specifically, he admitted that his "analysis doesn't involve creating projections of the future opioid population." Ex. E (Liebman Dep.) at 267:9-16. Without such projections, Liebman's solution is to simply double the Counties' treatment capacity by year four of his plan, without

⁹ See Ex. E (Liebman Dep.) at 146:13-147:4; Ex. A (Liebman 4/3/2019 Rep.) App'x D, Tables C.1, C.2, S.1, S.2.

any analysis of the actual number of individuals with OUD in the Counties. ¹⁰ *Id.* at 162:7-19. Liebman testified that "[a]ll I've ... done is followed the guidance of the literature, I've consulted the experts I've consulted that we need to ramp up capacity and maintain that capacity for at least 15 years." *Id.* at 174:4-13. He further testified that: "I figured out the level of services that are needed now and I assumed that that level of services would continue to be available into the future." *Id.* at 301:20-302:2. Ultimately, however, he conceded that this conclusion stemmed from the report of other experts in this same case, Dr. Lembke, *Id.* at 175:2-9, and Dr. Parran (whose report has since been withdrawn), Ex. E (Liebman Dep.) at 183:10-24, noting that they "thought [the doubling] was a reasonable *assumption* for me to be making." *Id.* at 183:15-19 (emphasis added). Yet Liebman conceded that he was unfamiliar with the empirical basis (if any) for Parran's or Lembke's reports. *Id.* at 184:9-12, 212:2-10.

Such assumptions based on the reports of other experts in the same litigation are hallmarks of unreliable expert testimony. This is especially true where an expert has been withdrawn. This Court has recognized that part of performing the gatekeeping function is to ensure that purported experts are "not merely parroting the opinions of others." *In re Whirlpool Corp. Front-Loading Washer Prod. Liab. Litig.*, 45 F. Supp. 3d 724, 741 n.6 (N.D. Ohio 2014) (internal quotation marks omitted); *see also In re Polypropylene Carpet Antitrust Litig.*, 93 F. Supp. 2d 1348, 1357 (S.D. Fla. 2000) (recognizing that Rules 702 and 703 do not permit an expert to "simply repeat or adopt the findings of another expert without attempting to assess the validity of the opinions relied upon"); *In re TMI Litig.*, 193 F.3d 613, 715-16 (3d Cir. 1999) (blind reliance on other experts in same litigation "is somewhat analogous to the last domino in

¹⁰ Liebman applied a similar methodology to his calculations related to MAT, only in that case he actually aimed to quadruple the capacity by year four. Ex. E (Liebman Dep.) at 210:19-214:2. This speculative conclusion is invalid for the same reasons as his treatment opinion.

the line that begins to fall when the first domino is toppled"). Put another way, Liebman cannot simply "leave [it] to someone else" to fill in the gaps in his methodology, *In re TMI*, 193 F.3d at 714-15, particularly where he is unable to evaluate the veracity of those other experts. *See In re Whirlpool Corp.*, 45 F. Supp. 3d at 741 n.6 ("an expert may rely on the work of others, but the expert must be able to testify to the veracity of that work").

Apart from failing the *Daubert* reliability test, Liebman's conclusions with respect to treatment and MAT also fail to reflect common sense. The assumption that treatment and MAT must be maintained at twice their year one levels (in the case of treatment) or four times (in the case of MAT) from years 4 through 15 suggests that he assumes that the abatement plan he created *will not reduce the number of individuals with OUD*. While Liebman noted that addiction is a "chronic condition that lasts for someone's lifetime," Ex. E (Liebman Dep.) at 215:20-216:1, he made no effort to calculate what the affected population would be during the successive years of the abatement plan. Even if some individuals may need additional treatment for years to come, the goal of any abatement plan would be to *reduce* the number of addicts. Liebman made no such calculation, *Id.* at 164:4-6; instead, he merely stated (with respect to the increased capacity) that "I certainly hope all the slots would be filled." *Id.* at 165:10-19. This "educated guess" is not sufficient to pass muster under Rule 702. *Asad v. Cont'l Airlines, Inc.*, 314 F. Supp. 2d 726, 734 (N.D. Ohio 2004).

Third, Liebman conducted a literature search, but could not articulate any coherent methodology behind that search—that is, he could not explain how he went about determining what literature he should review. Instead, he offered this *ad hoc* process:

I did what I always do when I am studying a topic. I do literature searches, I direct people working for me to do additional literature searches, I ask experts if there are other sources that would be relevant, and then I go find those sources. I—you know, if there's anything in one paper that cites another that looks

relevant, I'll go find that. I'll ask the experts, you know, if it's a particular question I'll say ... is there anything important that I'm missing?

Ex. E (Liebman Dep.) 93:17-94:5. This "methodology" offers no basis for determining or testing how he included or excluded certain literature. *See In re Lipitor (Atorvastatin Calcium) Marketing, Sales Practices & Prods. Liab. Litig.*, 174 F. Supp. 3d 911, 934-35 (D.S.C. 2016) (recognizing the need for a "systematic literature search" where expert witness testified "I read the articles," but could not offer any explanation for how she "identified such studies for her consideration" (internal quotation marks omitted)). Put another way, "[i]t is not a valid methodology ... to simply pick the articles that [an expert witness] happened to remember or that supported [the witness's] views, discuss them with a little commentary, and state an opinion." *Id.*

The problem with Liebman's *ad hoc* literature search is heightened by the fact that he conducted the search in the context of this litigation and without any prior experience with the task at hand. *See* Ex. E (Liebman Dep.) at 26:21-31:3 (discussing Liebman's experience with a two-week course he taught related to the opioid crisis, but in which he "wasn't generating a solution"). In considering whether expert testimony is sufficiently reliable, and thus admissible, under the *Daubert* standard, the court should place particular emphasis on whether the expert's research was conducted independent of litigation. *Newell Rubbermaid, Inc. v. Raymond Corp.*, 676 F.3d 521, 527 (6th Cir. 2012) ("In addition, if a purported expert's opinion was prepared solely for litigation, that may also be considered as a basis for exclusion.") (citing *Johnson v. Manitowoc Boom Trucks, Inc.*, 484 F.3d 426, 434 (6th Cir. 2007)); *see also Daubert v. Merrell Dow Pharm., Inc.*, 43 F.3d 1311, 1317 (9th Cir. 1995) ("*Daubert II*") ("[I]n determining whether proposed expert testimony amounts to good science, we may not ignore the fact that a scientist's normal workplace is the lab or the field, not the courtroom or the lawyer's office."). Moreover,

in a situation like this, courts are "suspicious of purported expertise premised solely or primarily on a literature review." *Smith v. Rasmussen*, 57 F. Supp. 2d 736, 766 (N.D. Iowa 1999) (citing cases), *rev'd on other grounds*, 249 F.3d 755 (8th Cir. 2001). "While this review may have been vital to [Liebman's] understanding generally of the issues and background of this litigation, it does not make [him] an expert on that particular subject." *In re Welding Fume Prod. Liab. Litig.*, No. 1:03-CV-17000, 2005 WL 1868046, at *6 (N.D. Ohio Aug. 8, 2005).

Fourth, from a process perspective, Liebman readily admitted that he did not follow many of the generally accepted practices in his field as established by the United States General Accounting Office ("GAO") in the publication *GAO Cost Estimating and Assessment Guide, Best Practices for Developing and Managing Capital Program Costs.* Ex. E (Liebman Dep.) at 123:2-4. For example, he did not: use an acceptable statistical analysis method (*e.g.*, a Monte Carlo simulation) to develop a confidence interval around the point estimate, *id.* at 126:13-21, provide confidence intervals, ¹¹ *id.* at 131:18-132-3, conduct an S-curve or an uncertainty analysis, *id.* at 133:1-134:4, or conduct a cost-benefit analysis. *Id.* at 135:17-20. When asked, "[s]o is it fair that you're not offering—to say that you're not offering an opinion as to how accurate your cost estimates are?," Liebman responded only that "I think that I've produced reasonable estimates ... I don't have a quantitative measure of the degree of certainty." *Id.* at 134:10-18. Classic *ipse dixit*.

¹¹ A confidence interval is "a common sense mechanism upon which statisticians rely to confirm their findings and to lend persuasive power within their profession. The confidence interval has two components: a percentage, and an interval or range. The *percentage* part is established by the statistician in advance of performing the studies ... The *interval*, on the other hand, represents a range of possible values at high and low ends of a scale of relative risk." *Turpin v. Merrell Dow Pharms.*, *Inc.*, 959 F.2d 1349, 1353 n.1 (6th Cir. 1992) (citing Kenneth Rothman, *Modern Epidemiology* 119 (1986)).

Liebman's failure to follow many of the generally accepted practices in cost estimating as established by the GAO undermines the reliability of the opinions stemming from his methodology. *See Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 593-94 (1993) (recognizing that one of the guideposts for reliability is whether the technique has been generally accepted in the proper scientific community).

b) Alexander

Alexander's opinion likewise is based upon an unreliable methodology, which included the use of a "Markov model." According to Alexander, "[a] Markov model is a mathematical model that allows for one to examine dynamic processes within a population." Ex. C (Alexander Dep.) at 102-03. Alexander testified that he used the Markov model to "estimate changes in populations affected by the opioid epidemic over time." *Id.* at 116:25-117:3. But he agreed that he did not apply this model to estimate population changes "locally in Cuyahoga and Summit Counties." *Id.* at 116:11-20. As discussed below, there are a number of limitations associated with Alexander's model that lead to unreliable results. Moreover, like Liebman, Alexander conceded that the data underlying his model was, in many respects, unreliable as well. This second layer of unreliability further undermines his conclusions and provides another basis for this Court to reject his opinions.

As an initial matter, this case is the first time in which Alexander has relied upon the use of a Markov model. Ex. C (Alexander Dep.) at 104:12-14. He could not offer any scientific basis for why he and his team even chose the Markov model, beyond the fact that "[w]e felt that it would give us the best answers to the questions that we posed." *Id.* at 108:19-109:1. Such a first-time use in the context of litigation counsels in favor of exclusion. *See Daubert II*, 43 F.3d at 1317; *Newell Rubbermaid, Inc.*, 676 F.3d at 527. And, because Alexander conceived of his

model in the context of this litigation, it was never tested in the crucible of peer review—as would be needed in order to assure its reliability. Ex. C (Alexander Dep.) at 105:22-106:3.

In addition to using a novel approach with an untested model, Alexander further admitted to a number of significant "limitations" that are inherent in the Markov model and which make it less reliable as a measure of abatement costs. According to Alexander, the model is "dependent upon assumptions." *Id.* at 109:6-110:7 (emphasis added). These assumptions fall into three categories: (i) assumptions about the populations at issue, *i.e.*, who is being affected; (ii) assumptions about the probabilities that the individuals within those populations will make certain transitions, *i.e.*, how the population is being affected; and (iii) assumptions about the costs. *Id.* Of course, take these three elements away, there is little left to analyze, and there is no conclusion about the cost to be rendered. Alexander knows this, because he recognized that "I think that assumptions are the major matter here." *Id.* at 110:16-17. Indeed, they are the *only* matter here. Put another way, he admits that the entire model is based on speculation.

Alexander tries to justify this speculation by pointing out that the opioid epidemic is "dynamic, nonlinear and uncertain," *id.* at 111:16-18, and as a result, his "model is a simplification of the phenomenon intended to capture only enough detail to inform key high-level policy questions." *Id.* at 112:22-25. While this may be true, it does not permit this Court to open the door to speculation—a particularly insidious occurrence when cloaked in the nomenclature of "expert" testimony. *See Asad*, 314 F. Supp. 2d at 734 (rejecting expert testimony based on an "educated guess" without a solid factual foundation); *see also Foust v. Metro. Sec. Servs.*, No. 10-cv-340, 2011 WL 4832570, at *5 (E.D. Tenn. Oct. 12, 2011) ("[A] trial court should serve as a gatekeeper in regards to proposed expert testimony, and should prevent the jury from being overwhelmed by unsupportable speculation cloaked as expertise.")

(quoting *Daubert*, 509 U.S. at 595-96). During his deposition, Alexander conceded several of these structural problems.

First, Alexander acknowledged that his model does not encompass all possible "transitions." Ex. C (Alexander Dep.) at 126:9-13. The "transitions" in the Markov model reflect probability determinations about whether certain groups of people will move from one population (e.g., the general population) to another (e.g., "medical use of opioids"). See generally Ex. C (Alexander Dep.) at 118-128. Specifically, he agreed that the model does not account for the 83% of the 11.4 million people who reported opioid misuse in 2017 who indicated that they bought, were given, or stole opioids from individuals who, in turn, had been prescribed those drugs by a licensed prescriber. Id. at 127:24-128:5; see generally id. at 123-128. This omission is, of course, particularly relevant to the present case to the extent that it ignores intervening criminal acts. Id. at 123:14-20. Alexander offered no way to exclude the effects of such acts from his model. When confronted with how this omission could undermine the model's reliability, Alexander could offer nothing more than a "guess," and reiterated how the model is "a simplification," and that the omission of the transition between the general population and those who use opioids nonmedically "represents either a decision regarding a simplification or a data point that wasn't readily available to us." *Id.* at 129:7-25. Put simply, this omission reflects the type of "analytical gap" that renders expert testimony unreliable and therefore inadmissible. See Joiner, 522 U.S. at 146.

Second, with respect to his cost estimates, Alexander conceded that he did not calculate a confidence interval as it related to any of his calculations. **See** Ex. C (Alexander Dep.) at 214:25-215:4. Instead, Alexander suggested that he "did examine how sensitive the final dollar amount was to the assumptions we were making." **Id.** at 214:19-21. Adding to the uncertainty,

Alexander further conceded that he had no *a priori* precision requirements for the model—that is, there are no requirements that the model offer estimates within some pre-determined level of certainty, as a means to ensure that the outputs are reliable.¹² *Id.* at 302:2-20; 303:5-13. This failure to have any measure of reliability—either by setting precision requirements for the model or calculating a confidence interval—demonstrates the lack of reliability in Alexander's estimates. *See Turpin*, 959 F.3d at 1353 n.1 (recognizing that confidence intervals are used to "gauge the reliability and credibility of [experts'] reports ...").

Third, with respect to assumptions about the individuals affected, Alexander's deposition testimony revealed a number of shortcomings and assumptions that further undercut any finding that the resulting calculations are reliable. Specifically, Alexander acknowledged that: (1) the NSDUH population data "does not capture well individuals who may be institutionalized, individuals who may be in jail or in long-term care facilities, individuals who are homeless, nor does it capture individuals that may have a lifetime history of [OUD] but not active or past-year [OUD]," Ex. C (Alexander Dep.) at 162:4-12; and (2) the Centers for Disease Control data he relied upon often contains inaccurate causes of death, which can result in inaccurate data and make it difficult to count opioid-related deaths accurately, id. at 164:14-23. In one of the most stark errors related to population estimation, Alexander conceded that the assumption he used in his model related to the number of individuals in drug courts included the entire drug court population—not just opioid users: "Q. So is it your testimony, sir, that this number, this 120,000 drug court population, is exclusively people who are in drug court because they used

This lack of reliability was subsequently demonstrated when the model consistently overestimated rate of OUD looking back for years 2011, '12, '13, '14, '15, and '16, yet Alexander could not explain what was done to remedy this—and in 2016, the model was still 15% higher than what was reported in the NSDUH. Ex. C (Alexander Dep.) at 158:2-20.

opioids? A. No, it is not." *Id.* at 228:9-13. The testimony continued: "Q. Your model, in terms of its criminal justice intervention abatement cost calculations, would be more reliable if the drug court population that you were focused on was only the drug court population that was in drug court because of the use of opioids? ... A. Yeah." *Id.* at 228:25-229:9. "Q. But you have no—no source for an estimate that half of the participants in drug court are there because of the use of opioids. A. I don't have a precise source to provide you to support that assumption." *Id.* at 235:25-236:5.

All told, these were just a few of the dozens of total inputs to his model that Alexander admitted were unsupported assumptions.¹³ Although he testified that he recalled having had "discussions" about some of these assumptions, he offered no further detail. *Id.* at 183:6-9. With so much of his data resting on conjecture, Alexander's abatement opinion should be excluded as unreliable. "[N]o matter how good experts' credentials may be, they are not permitted to speculate." *Tamraz*, 620 F.3d at 671 (citing *Goebel v. Denver & Rio Grande W. R.R. Co.*, 215 F.3d 1083, 1088 (10th Cir. 2000) (internal quotation marks omitted)).

The other parameters Alexander based on assumptions included: mass media target population; length of first responder training; cost for first responder training; residential program population for pregnant women; and the cost per detailer per year (which was, in turn, based on four underlying assumptions). Ex. C (Alexander Dep.) at 174:7-178:4. Other parameters based on assumptions include the number of physician visits by a detailer, *id.* at 178:13-20; percentage of foster and adoption population younger than eight; rate of intravenous drug use that is opioid use; drug disposal programs; proportion of individuals served by syringe exchange programs, *id.* at 186:16-187:18; the proportion of Supervised Consumption Facilities ("SCFs") in cities similar to Baltimore and San Francisco, *id.* at 189:9-17; the number of new SCFs, *id.* at 191:2-10; the number of fentanyl testing strips needed per injection; and the extra costs for program management, including administrative personnel and shipping. *Id.* at 193:18-194:8.

2. Inconsistencies regarding timeframe

Liebman and Alexander's methodologies also are unreliable to the extent that they cannot even agree on how long abatement should take. Specifically Alexander's plan calls for 10 years of funding, while Liebman's seeks 15. Ex. E (Liebman Dep.) at 289:11-21. As noted above, Liebman relies on Lembke for the need to ramp up and maintain capacity for at least 15 years, *id.* at 175:6-9, but Lembke does not cite any sources for this statement. *Id.* at 178:9-11. Liebman had a call with Lembke and Parran, which left him with an "impression and memory" that 15 years is better than 10. *Id.* at 293:10-294:7. But ultimately, he admitted that he did not have a "quantitative sense" for how long the abatement process would take. *Id.* at 113:21-114:7.

3. Inability to test methods

Daubert provides that another measure of reliability is the ability to test the expert's proffered opinions. See Daubert, 509 U.S. at 593 (recognizing that a "key question" whether an expert's opinion "can be (and has been) tested" is a factor bearing on its reliability). To that end, Liebman identified no metric that could accurately predict, let alone test, the success of any of the abatement activities he outlined in his report; instead, he testified that "[t]he goal is to make as much progress as one can make." Ex. E (Liebman Dep.) at 271:1-2. Even before implementation, Liebman admitted that he has not tried to measure any impact that implementing any one or more of the actions in his abatement plan might have going forward. Id. at 110:8-14. To that end, Liebman's opinions leave little room for testability short of the "wait-and-see" approach he suggested during his deposition.

Alexander, too, relied on a similar notion, testifying that he believed the only test of success would be whether it "lead[s] to large reductions in opioid-related morbidity and mortality." Ex. C (Alexander Dep.) at 352:19-25. As noted, he did not develop a specific method of testing his model to ensure reliability: "So if another expert looked at this model and

made different assumptions would you agree that the results would change? ... A. They—yes." *Id.* at 198:10-15. This lack of testability is entirely consistent with Alexander's testimony and report, both of which concede that his conclusions are merely a "preliminary analysis of the national costs of fifteen types of remedies." *Id.* at 134:19-23; Ex. A (Alexander 4/3/2019 Rep.) at 55. Given these factors, Alexander agreed that "the exact costs of abatement are difficult to estimate" and exact costs "will depend upon the population requiring services and the programs in existence in each jurisdiction." *Id.* at 134:2-11; Ex. A (Alexander 4/3/2019 Rep.) at 54.

Neither approach is sufficient to pass muster under the rigorous admissibility requirements imposed by *Daubert* and should be rejected.

Ultimately, both Alexander and Liebman's methods are unreliable because they were not created in a lab or in the field, but because they were crafted explicitly for use in the courtroom. *Daubert II*, 43 F.3d at 1317. They rely on questionable data that was manipulated in questionable ways. These are the hallmarks of unreliable expert testimony because they reflect a "haphazard, intuitive inquiry" that can be rejected on reliability grounds alone. *Oddi v. Ford Motor Co.*, 234 F.3d 136, 156 (3d Cir. 2000).

II. To The Extent Plaintiffs' Other Experts Opine About Abatement, Those Opinions Must Also Be Excluded

A. Keyes

The bulk of Keyes's report is not aimed at abatement, but to the extent that she does address the issue, her conclusions are neither reliable nor helpful. To begin with, Keyes testified that she "was not asked to evaluate the best policies and programs. I was asked to—my approach to this report was to outline the evidence for three solid programs that had a strong evidence base." Ex. G (Keyes Dep.) at 366:21-367:3. The programs Keyes identified are the use of MAT, naloxone distribution, and fentanyl testing. Ex. F (Keyes Rep.) at 30-40. She does not

offer in her report estimates of how much these programs would cost to implement, nor did she consider the extent to which these services are already being provided and paid for by, for example, federal grants. *See*, *e.g*. Ex. G (Keyes Dep.) at 372-373 ("I think that there are a broad range of institutions that can participate in reversing the opioid epidemic. What currently occurs in terms of the participation of institutions to reduce the impact of the opioid epidemic and what could possibly occur,—what I'm addressing here is the evidence for these programs for their ability to reduce the opioid epidemic, and that's what's in the report."). Keyes also assumed that the Counties would need money to provide naloxone to "Cuyahoga County EMS" and "Summit County EMS," despite the fact that county-level EMS services do not exist. Ex. G (Keyes Dep.) at 379:11-384:21; 386:15-388:22.

These omissions show that Keyes's opinions lack the necessary context and connection to the facts of this particular case to be admissible. *Pride*, 218 F.3d at 578; *In re Scrap Metal Antitrust Litig.*, 527 F.3d at 529. Without a more detailed analysis of the Counties' pre-existing resources and remaining unmet needs, and an accounting for what it would actually cost to meet those needs (as opposed to an abstract identification of "solid programs"), Keyes's opinions are meaningless and should be excluded.

In addition, Keyes's opinions also should be excluded because they are based largely upon unreliable data. Specifically, her conclusions regarding MAT were driven almost entirely by her estimation of the number of individuals living with OUD, which in turn was based on an extrapolation from the overall "number of overdose deaths." Ex. F. (Keyes Rep.) at 32; Ex. G (Keyes Dep.) at 400:5-19; 407:18-408:1. The number of overdose deaths came from a single academic paper (Degenhardt *et al.* (2011)), which consisted of a meta-analysis of 39 "cohort studies" of the overdose mortality rate of individuals who were dependent or regular users of

opioids. *Id.* at 32-33. The Degenhardt meta-analysis estimated an overall overdose death rate of 0.65 per 100 person-years of observation. *Id.* Keyes merely "estimated" that "the majority of those overdose deaths [are] due to opioids," Ex. F (Keyes Rep.) at 33, but did not conduct a statistical analysis for that assumption. Ex. G (Keyes Dep.) at 391:5-17.

Moreover, the Degenhardt paper identified a number of limitations in its analysis, including the "heterogeneity" of the underlying studies in the meta-analysis. *See* Ex. G (Keyes Dep.) at 410-413. Specifically, the length of follow-up in the studies ranged from one to 36 years, *id.* at 411:3-17, and only three of the studies used in the meta-analysis included populations within the United States. *Id.* at 416:7-11 (based on the limited sample size from the U.S., Keyes admitted that "as far as I know ... the overdose rate among regular or dependent users of opioids in the United States has not been systematically investigated"). Despite these admitted limitations, Keyes offered a vague defense of the Degenhardt study, stating "I don't necessarily think that that is—it really depends on what the research question you're asking is and what you're using those data for, in terms of the meaningfulness of aggregation." Ex. G (Keyes Dep.) at 411:3-413:16.

Taken together, these complicated layered assumptions and extrapolations render Keyes's opinions related to abatement unreliable. Courts have recognized that when an expert layers one assumption on top of others, it undermines the overall reliability of the data. *Vincent v. United Techs. Corp.*, 854 F.2d 1318, Table at *1 (4th Cir. 1988) (*per curiam*) ("Expert testimony is not admissible when the conclusions are based on multiple layers of assumptions. At some point, the addition of assumptions to the bare facts in a record take the expert's opinion from the realm of fact to that of mere speculation, rendering it incompetent."); *Power Integrations, Inc. v. Fairchild Semiconductor Intern., Inc.*, 711 F.3d 1348, 1374 (Fed. Cir. 2013) (recognizing that

the proffered expert's "layered assumptions lack the hallmarks of genuinely useful expert testimony"). Keyes's opinions as they relate to abatement must be excluded.

B. Plaintiffs' Other Experts—Wexelblatt, Young, and McGuire—Do Not Offer Relevant Opinions On Abatement That Fit The Case

1. Wexelblatt

Wexelblatt was "asked to provide an expert opinion on the effects of opioid addiction on pregnant mothers and infants with a focus on neonatal abstinence syndrome (NAS) and its impact on Cuyahoga and Summit Counties." Wexelblatt Report at 3. According to Wexelblatt, "[i]n order to address this urgent issue and improve outcomes, the Counties should develop and enhance multidisciplinary programs and services for early intervention, prevention, and support." *Id.* at 22. His opinion should be excluded for three reasons.

First, with respect to the lack of connection between the Defendants' alleged conduct and Wexelblatt's proposals, Wexelblatt testified that he would have "no idea" how and did not intend to offer any opinions about whether any specific Defendants or groups of Defendants caused harm claimed by the Counties. Ex. I (Wexelblatt Dep.) at 151:19–152:3; 152:25–153:6. He had no opinion about the cause of the "opioid crisis" other than his understanding that the levels of prescriptions in Ohio and the country increase. Id. at 182:14–20. Second, Wexelblatt testified that he would not offer any opinions about the cost of implementing his plan or any past or future expenses incurred by the Counties. Id. at 138:6–10; 187:25–188:5. Third, Wexelblatt stated that he has no knowledge as to how his proposals relate to what the Counties and other government entities are already are doing. Id. at 158:23–159:9. Given that Wexelblatt's report and testimony relate only to best practices, are not tailored to the Counties, and lack detail about cost, his testimony and opinions should be excluded to the extent Plaintiffs seek to use him as an expert on abatement.

2. Young

Young was "asked to give her opinions regarding the impact of the opioid crisis on child welfare systems and related agencies including recovery courts, and to offer her opinion on necessary and appropriate remedies in response to the opioid epidemic." Young Report at 1. In her report, Young describes best practices and makes recommendations to address the impact of increasing substance abuse. *Id.* at 35–37; Ex. K (Young Dep.) at 166:21–167:11. Young, however, has no opinion on (1) any Defendant's alleged injurious conduct and how it relates to her recommendations, Ex. K (Young Dep.) at 92:7–12; (2) how much her recommendations would cost, *id.* at 94:4–21; (3) whether the Counties' previous actions to address the opioid epidemic were reasonable and timely, *id.* at 164:17–165:12 (objection omitted); (4) the extent to which her recommendations pertain to the effects of opioid substance abuse of opioids versus non-opioid substance abuse, *id.* at 362:6–14 (objection omitted); or (5) which proposals involve actions that the Counties (as opposed to some other body) could take to address the opioid epidemic, *id.* at 423:15–424:4 (objection omitted).

Given the limits of Young's report and testimony, she should be excluded to the extent Plaintiffs seek to use her as an expert on abatement.

3. McGuire

McGuire's "Public Nuisance" report expressly disclaims any opinion on abatement: "I have not been asked to offer an opinion on the scope or cost of programs needed to abate this nuisance, but such a report could be submitted at such time as the Court deems appropriate." McGuire Public Nuisance Report at 3 n.6. But to the extent that Plaintiffs may try to use McGuire's calculations of the economic costs of the claimed public nuisance to inform their abatement argument, they are irrelevant for two reasons. First, the costs that McGuire purports to quantify relate to *all* opioid shipments, not just those shipments that are attributable to

Defendants' allegedly wrongful conduct—thus they are not directly related to such conduct and irrelevant for abatement purposes. *Beretta U.S.A.*, 768 N.E.2d at 1148. Second, the aggregate costs McGuire identifies are not costs that were borne by the Counties, again rendering them unhelpful for abatement purposes. *See Triangle Properties*, 3 N.E.3d at 255 (recognizing that plaintiffs "should not receive a windfall"). For these reasons, Plaintiffs should not be allowed to argue that McGuire has anything relevant to say on abatement.

CONCLUSION

For the foregoing reasons, this Court should exclude the testimony of Plaintiffs' abatement experts: Dr. Caleb Alexander and Dr. Jeffrey Liebman in their entirety and the abatement-related testimony of Dr. Katherine Keyes, Dr. Scott Wexelblatt, Dr. Nancy Young, and Dr. Thomas McGuire.

Dated: June 28, 2019

Respectfully submitted,

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¹⁴ Teva Pharmaceutical Industries Ltd., Allergan plc, and Mallinckrodt plc are respectively an Israeli corporation, Irish holding company, and Irish company that are not subject to and contest personal jurisdiction for the reasons explained in their pending motions to dismiss for lack of personal jurisdiction; they are specially appearing to join this motion as a result of the Court's deadline to file dispositive and Daubert motions, and, thus, they do not waive and expressly preserve their pending personal jurisdiction challenges.

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LOCAL RULE 7.1(F) CERTIFICATION

Pursuant to the Court's Order Regarding Pretrial Motions for "Track One" Trial, ECF # 1653, *Daubert* motions may be filed with a limit of 14 pages per expert. This memorandum in support adheres to the limits set forth in that order, as it addresses 6 experts, and totals 36 pages.

/s/ Shannon E. McClure

Shannon E. McClure

CERTIFICATE OF SERVICE

I hereby certify that Distributors have served the foregoing on the Parties, the Court, and the Special Masters in accordance with the Court's directions at Doc. No. 1719.

/s/ Shannon E. McClure

Shannon E. McClure